

WHAT IS CLAIMED IS:

1. A storage device, comprising:
 plural storage volumes for storing data;
 means for receiving a request for update of
the data at a prescribed point in time to be stored in
a first of the storage volumes after the prescribed
point in time;

 means for storing a duplicate of the data at
the prescribed point in time requested to be updated
onto a second of the storage volumes; and

 means for storing in an unused storage area
of a third of the storage volumes a duplicate of the
data at the prescribed point in time requested to be
updated according to a state of the second storage
volume.

2. The storage device according to Claim 1,
wherein:

 the means for storing onto an unused storage
area of the third storage volume the duplicate of the
data at the prescribed point in time requested to be
updated according to a state of the second storage
volume is:

 means for storing the duplicate of the data
at the prescribed point in time requested to be updated
onto an unused storage area of the third storage volume
when a storage capacity of the unused storage area of
the second storage volume is smaller than a judgment
value.

3. The storage device according to Claim 2,
further comprising:

means for showing a storage capacity of the
unused storage area of the second storage volume on a
user interface.

4. The storage device according to Claim 2,
further comprising:

means for showing a warning on a user
interface according to a storage capacity of the unused
storage area of the second storage volume.

5. The storage device according to Claim 1,
further comprising:

means for selecting the third storage volume
according to information, which is input through a user
interface to designate the third storage volume.

6. The storage device according to Claim 1,
further comprising:

means for selecting the third storage volume
according to a storage capacity of an unused storage
area of the individual storage volumes possessed by the
storage device.

7. The storage device according to Claim 1,
wherein:

the means for storing in the second storage
volume the duplicate of the data at the prescribed
point in time requested to be updated are:

means for dividing a portion of the storage
area, onto which the duplicate of the data is stored,

among the storage areas of the second storage volume into sections for storing the data; and

means for writing the duplicate of the data onto a portion of the storage area divided into the sections.

8. The storage device according to Claim 1, wherein:

the means for storing onto the unused storage area of the third storage volume the duplicate of the data at the prescribed point in time requested to be updated according to a state of the second storage volume are:

means for dividing into sections for storing the data a portion of the unused storage area, onto which the duplicate of the data is stored, in the unused storage areas of the third storage volume; and

means for writing the duplicate of the data onto a portion of the unused storage area which is divided into the sections.

9. A method of controlling a storage device provided with plural storage volumes for storing data, comprising:

receiving a request for update of the data at a prescribed point in time to be stored in a first of the storage volumes after the prescribed point in time;

storing a duplicate of the data at the prescribed point in time requested to be updated onto a second of the storage volumes;

and

storing the duplicate of the data at the prescribed point in time requested to be updated onto an unused storage area of a third of the storage volumes according to a state of the second storage volume.

10. The method of controlling a storage device according to Claim 9, wherein:

the step of storing the duplicate of the data at the prescribed point in time requested to be updated onto the unused storage area of the third storage volume according to the state of the second storage volume is:

a step of storing the duplicate of the data at the prescribed point in time requested to be updated onto the unused storage area of the third storage volume when a storage capacity of the unused storage area of the second storage volume is smaller than a judgment value.

11. The method of controlling a storage device according to Claim 10, further comprising:

showing the storage capacity of the unused storage area of the second storage volume on a user interface.

12. The method of controlling a storage device according to Claim 10, further comprising:

showing a warning on the user interface according to the storage capacity of the unused storage

area of the second storage volume.

13. The method of controlling a storage device according to Claim 9, further comprising:

selecting the third storage volume according to information, which is input through the user interface to designate the third storage volume.

14. The method of controlling a storage device according to Claim 9, further comprising:

selecting the third storage volume according to a storage capacity of an unused storage area of the individual storage volumes possessed by the storage device.

15. The method of controlling a storage device according to Claim 9, wherein:

the step of recording the duplicate of the data at the prescribed point in time requested to be updated onto the second storage volume comprises:

dividing a portion of the storage area, onto which the duplicate of the data is stored, among the storage areas of the second storage volume into sections for storing the data; and

writing the duplicate of the data onto a portion of the storage area divided into the sections.

16. The method of controlling a storage device according to Claim 9, wherein:

the step of storing the duplicate of the data at the prescribed point in time requested to be updated according to a state of the second storage volume onto

an unused storage area of the third storage volume comprises:

a step of dividing into sections for storing the data a portion of the unused storage area, onto which the duplicate of the data is stored, in the unused storage area of the third storage volume; and

a step of writing the duplicate of the data onto a portion of the unused storage area which is divided into the sections.